

Agriview

Connecting kids with agriculture

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Minister's Message



Ken Krawetz
Lyle Stewart

Finance Minister Ken Krawetz recently introduced the 2014-15 provincial budget, *Steady Growth*. The 2014-15 Provincial Budget focuses on steady growth, characterized by controlled spending and a growing economy that allows investment into the quality of life for all Saskatchewan people.

Saskatchewan Agriculture's budget for the upcoming year is \$371.6 million. Our government has now introduced the six largest Agriculture budgets in the province's history. Approximately 65 per cent of the 2014-15 budget will go towards fully funding business risk management programs including AgriStability, AgriInvest and Crop Insurance.

The Crop Insurance budget is \$165.4 million with coverage of \$162 per acre – the fourth highest coverage in the program's history. Improvements to the 2014 Crop Insurance Program include: improved yields for barley and durum, a pilot program to provide yield loss coverage for corn in the east central and southeast areas of the province and a pilot Bee Mortality Insurance Program. Saskatchewan Crop Insurance Corporation will also deliver Western Livestock Price Insurance to Saskatchewan ranchers providing protection against unexpected market price declines.

To help ensure continued growth in the agriculture industry, \$78.7 million, an increase of \$7.5 million from 2013-14, will be invested into eight strategic initiatives through the federal-provincial Growing Forward 2 framework.

Under Growing Forward 2, the Ministry of Agriculture has developed programs to support farmers, ranchers and agribusinesses, including: the Agriculture Operators Program to help address the labour shortage the industry has been facing; the Trade and Market Development Program to help industry's efforts to market agriculture products and improve market access; and the Saskatchewan Lean Improvements in Manufacturing program to provide support to agribusinesses to improve productivity and efficiency through the adoption of best practices.

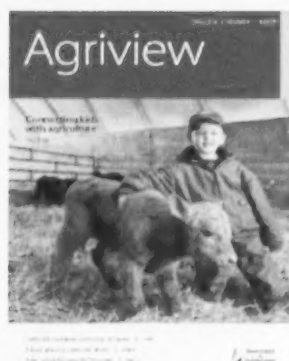
Our government continues our commitment to agriculture research with a \$26.7 million investment, a more than 100 per cent increase since 2007.

Agriculture remains a driver of the provincial economy and a priority for our government. However, we know that our industry is not without its challenges, including grain transportation. Our Government is committed to moving this year's crop as quickly as possible, and also ensuring that a backlog of this type never happens again.

The 2014-15 Agriculture budget will help support the steady growth of our industry. I look forward to working with you to meet our goals and keep agriculture moving forward in Saskatchewan. ■

**The 2014-15 Provincial
Budget focuses on
steady growth.**

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Cover: Calving season is in full swing at the Howe farm south of Moose Jaw, SK. Your Agriview has an updated design with articles that are easier to read. Let us know what you think of the new look!

AGRIVIEW is published by the Communications Branch of Saskatchewan Agriculture for Saskatchewan farmers, ranchers and farm and food organizations. For more information, call 306-787-5160 or email agriview@gov.sk.ca. To view this publication online, visit www.agriculture.gov.sk.ca/programs-services.

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Weed control in flax



Clark Brenzil, PAg
Provincial Specialist, Weed Control
Crops and Irrigation Branch

Weed control in flax is both fairly simple and quite challenging. It is simple, since there are a small number of herbicide options for use in flax relative to other crops, but it can also be very challenging if you have weeds in your field that the current herbicides are unable to address.

Whether mixed with bromoxynil (bromoxynil/MCPA products) or with clopyralid (*Carroll M*), MCPA provides decent control of seedlings of a number of weeds, particularly those in the mustard family. Combination with bromoxynil adds control of species such as wild buckwheat. Combinations with clopyralid are effective on wild buckwheat as well as on perennial weeds such as Canada thistle and dandelion.

Sulfentrazone (*Aurum* brands) may be applied prior to or shortly following the seeding of flax, and remains active throughout the growing season to control challenging weeds such as kochia and redroot pigweed. It also has an effect on wild buckwheat and lamb's quarters. Since sulfentrazone is limited to these four weeds, post emergent broadleaf weed control will still be necessary.

Post emergent herbicides for grassy weed control in flax are all Group 1 herbicides. With the increase in Group 1 resistant wild oats and green foxtail, producers may consider other grass control options in flax. These alternatives are soil-applied and require incorporation to be effective. In direct seeding systems, the best option is to apply late in the fall and then use a shallow-angle harrow to vibrate the trash layer so the granular herbicides reach the soil surface. Triallate (*Avadex*) is a Group 8 herbicide that only controls wild oat. Trifluralin (various brands) is a Group 3 herbicide that controls wild oat, green foxtail and other annual grasses and some select broadleaf weeds. *Fortress* contains both triallate and trifluralin but is limited to grass control only.

Because of the limited herbicide options in flax, producers should grow flax in a diverse crop rotation that will allow weeds that are challenging in flax to be managed in other years prior to growing flax. The rotation should include cereal and broadleaf crops. ■

FOR
MORE
INFO

See the 2014 Guide to Crop Protection online at www.agriculture.gov.sk.ca/Guide_to_Crop_Protection. Hard copies are available at local crop input suppliers or Saskatchewan Agriculture Regional Offices.

Producers in eastern Saskatchewan should watch for wheat midge



Scott Hartley, PAg
Provincial Specialist, Insect and Vertebrate Pests
Crops and Irrigation Branch

The eastern regions of Saskatchewan appear to be at the highest risk of a wheat midge infestation in the upcoming crop year, according to the 2014 wheat midge forecast. The risk of infestation in the northwestern and west-central parts of the province has declined from last year.

The highest risk of wheat midge infestations in 2014, as shown in the Saskatchewan Forecast Map, appears to be in the Black and Dark Brown Soil Zones in the eastern regions of the province, an area where the wheat midge is a frequent pest. Increased populations of the midge were noted in Brown Soil Zones in south-central and southwestern regions of Saskatchewan where higher moisture conditions have been favourable to the midge. Other areas of high midge density have been identified in the north-central region around Prince Albert.

The wheat midge forecast map is intended to provide an estimate of risk on a regional basis. Producers should note that actual wheat midge populations will vary from field to field, and not all fields in all rural municipalities are sampled. The 2014 midge map is based on wheat midge cocoons extracted from 420 soil samples that were collected in the fall of 2013. The map depicts only viable, non-parasitized wheat midge larvae and cocoons.

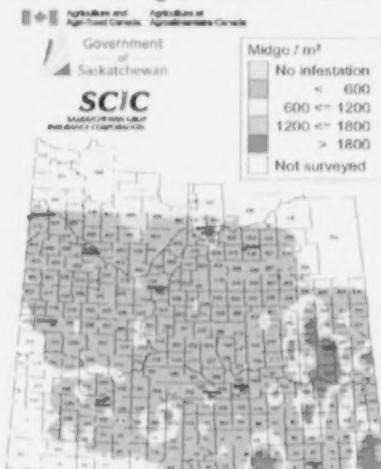
In areas indicating greater than 1,200 wheat midge per square metre, producers growing conventional spring wheat are advised to include the cost of an insecticide application in their 2014 budgets. If environmental conditions are favourable, significant damage and yield loss may still occur in areas indicating over 600 wheat midge per square metre.

Effective non-chemical management options include planting a non-susceptible cereal crop (e.g. oats, barley) or a broadleaf crop (e.g. canola, pulse). If spring wheat is planned as part of a rotation in 2014, there are

midge-tolerant wheat varieties available as varietal blends (VB). Midge-tolerant durum wheat varieties are not yet available.

For more information on midge-tolerant wheat and varietal blends, visit www.midgetolerantwheat.ca. For more information on currently available varietal blends, visit www.midgetolerantwheat.ca/farmers/seed-varieties.aspx. ■

Wheat Midge Forecast 2014



FOR
MORE
INFO

Contact Scott Hartley, Provincial Specialist, Insect and Vertebrate Pests, at 306-757-4669 or scott.hartley@gov.sk.ca.

Invasive Plant Control Program

Clark Brenzil, PAg
Provincial Specialist, Weed Control
Crops and Irrigation Branch

As a part of Growing Forward 2 (GF2) a federal provincial territorial initiative, two five year programs to address invasive alien plants were approved as a part of a larger Comprehensive Pest Control Program. Both programs are administered by the Saskatchewan Association of Rural Municipalities (SARM) and began in 2013.

The Invasive Plant Management Program existed under Growing Forward and has been carried forward under Growing Forward 2. This program provides wages and travel expenses for a project coordinator to help rural municipalities (RMs) and other organizations, such as watershed groups and First Nations bands, deal with invasive plants. This help can include:

- Raising awareness of invasive species concerns with RMs;
- Teaching integrated control techniques for established invasive plants;
- Assisting RMs and other groups with the development of long-term invasive plant management plans;
- Promoting the establishment of Cooperative Weed Management Area agreements; and
- Monitoring of biological control sites and redistribution of the biological control agents to new locations.

A new program under GF2 is the Invasive Plant Control Program (IPCP). This program offers rebates to land owners or renters, RMs and other groups for the control of prohibited weeds listed under *The Weed Control Act* as well as several noxious weeds: leafy spurge, yellow foxtail, Russian knapweed and common tansy. Rebates of 100 per cent are available for prohibited weeds and rebates of 50 per cent are available for the listed noxious weeds on private land or leased Crown land or 100 per cent on public land such as rural roadsides. All funding goes through the local RM. To participate, an RM needs the following:

- Appoint a qualified weed inspector to coordinate activities within the RM;
- Create a long-term weed/ invasive plant management plan indicating priorities;
- Identify, document and map invasive plant locations and sprayed areas and provide estimated acreages treated;
- Provide receipts for herbicides purchased indicating the per unit cost of the approved herbicide applied; and
- Complete one application form for applications to private land and another for applications to public land. ■

FOR
MORE
INFO

Visit the Saskatchewan Association of Rural Municipalities website at www.sarm.ca and look under administered programs.

Recycle your pesticide and fertilizer containers



Richard Wilkins
Provincial Specialist, Pesticide Regulatory
Crops and Irrigation Branch

Did you know that the plastic collected through the national pesticide container recycling program is cleaned and shredded and that the majority of the recycled plastic is turned into drainage tiles to be used back on the farm?

Pesticide container recycling is managed by the industry steward, CleanFARMS, which operates pesticide container recycling programs across Canada in partnership with agriculture retailers and municipalities. The aim of this program is to keep empty pesticide containers from farmers and other custom applicators out of the municipal waste stream and to direct the plastic for recycling.

CleanFARMS extensive testing throughout the collection and recycling process ensures that environment and human health are protected. CleanFARMS only allows the recycled plastic to go into products that have little contact with humans.

In 2012, the CleanFARMS empty pesticide container recycling program expanded to include fertilizer containers, so farmers are now able to return their empty pesticide and fertilizer containers at the same time.

As the table indicates, Saskatchewan accounts for approximately 40 per cent of the agricultural pesticides sold nationally. Saskatchewan also accounts for approximately 40 per cent of the empty pesticide containers returned for recycling.

Nationally, a total of 4,578,700 empty pesticide containers were returned to collection sites throughout Canada in 2012, an increase from 4,404,390 containers in 2011.

Containers collected across Canada:

Location	Kilograms	Containers collected	Collection locations
BC	20,100	55,300	29
AB	487,700	1,312,800	105
SK	665,400	1,793,200	403
MB	249,000	609,900	109
ON	220,600	546,400	167
QC	57,600	124,500	107
PEI	27,000	79,200	10
NB	11,800	34,100	11
NS	7,600	23,300	5
TOTAL	1,746,800	4,578,700	946

Since the program began, more than 96 million containers have been recycled. The rate of return for the containers is 66 per cent nationally. Saskatchewan's container return rate fluctuates between 70 and 75 per cent. This shows that Saskatchewan farmers are leading the nation in their commitment to environmental stewardship.

CleanFARMS' goal is to increase the health, safety and environmental performance of this program. It is working towards increasing the container return rate so more containers are safely and responsibly recycled. It is also communicating with growers to increase program awareness and education.

For more information on container recycling program and other CleanFARMS' programs, visit their web site at www.cleanfarms.ca. ■

FOR
MORE
INFO

Contact Richard Wilkins, Provincial Specialist, Pesticide Regulatory, at 306-787-5207 or richard.wilkins@gov.sk.ca.

Seed quality and seeding rates are crucial to a good plant stand



Sherrilyn Phelps, M.Sc., P.Ag., CCA
Regional Crops Specialist, North Battleford
Regional Services Branch

Seed quality and seeding rates are important for establishing good plant stands and—unlike the weather—are two factors over which we have control. Determining the quality of the seed starts with a seed test prior to buying seed or seeding the crop. Sending a seed sample to a qualified lab can provide information on germination, vigour, diseases present and purity. All of these factors help to inform growers whether the seed is suitable for planting. Germination tells us how many seeds are expected to germinate and the vigour gives an indication of how well the seedlings will thrive under stressful conditions. Disease tests identify the level of seed borne diseases in the sample and help determine whether a seed treatment is recommended. Seed with good germination and a high disease level may still be suitable for planting as long as a seed treatment that controls the disease is used. Another piece of information one can obtain from a seed test is the thousand kernel weight (TKW). TKW and germination are needed when calculating the seeding rate using the following formula:

$$\text{Seeding rate (kg/ha)} = (\text{target plant population/m}^2) \times (\text{TKW in grams}) \div (\text{expected seedling survival in per cent})$$

Target plant populations for various crops are shown in the adjacent table. Expected seedling survival is typically five to 20 per cent less than the germination rate with pulses and cereals—more under ideal conditions and less under adverse conditions. For canola, expected survival rates range from 40 to 60 per cent. Factors to take into account when determining the expected seedling survival are seeding date, soil temperature, moisture and texture as well as possible soil borne diseases and insect pressures. The

Target plant population and thousand kernel weight (TKW) in grams for various crops:

Crop	Target Plant Population (per square metre)	TKW (grams)
Wheat – hard red spring	250	31-38
Wheat – CWS	250	39-50
Durum	210-250	41-45
Wheat – SWS	210-250	44-36
Barley – 2 row	210-250	40-50
Barley – 6 row	210-250	30-45
Oat	215-320	30-45
Triticale – spring	310	42-48
Canola/Mustard	70-100	2-3 (Mustard/Polish Canola) 5-6.5 (Yellow Mustard) 2.5-7.5 (Argentine Canola)
Flax	300-400	5-6.5
Pea	85	125-300
Fababean	45	350-420
Lentil	105-147	30-80
Chickpea	44	220-450

amount of seed-placed fertilizer and the seeding depth are factors that can also affect seedling survival. ■

FOR
MORE
INFO

Contact Sherrilyn Phelps, Regional Crops Specialist, at 306-446-7475 or sherrilyn.phelps@gov.sk.ca.

Spring soil testing: get the best out of your fields



Ken Panchuk, P.Ag.
Provincial Specialist, Soils
Crops and Irrigation Branch

Collecting a truly representative soil sample for a field is the most important task of sampling. Soil testing labs in Saskatchewan will take immediate delivery of fresh soil samples, so there is no need to spend valuable time drying the samples prior to delivery; however, fresh samples need to be shipped promptly to maintain quality.

A recent study by the University of Saskatchewan showed that, for zero tillage systems in which nutrients are applied in bands into the soil, approximately 30 random cores were needed for a composite soil sample. This is up from 20 cores per field in the previous recommendation. If the soil is being sampled by collecting a thin strip across the rows of seeding, then a two- to two and a half foot slice of soil about six inches deep is required to accurately represent the available nutrients for that field.

Growers can get more from a soil test by providing as much detailed information as possible about the field. It should include previous crop, yield and subsoil moisture measurements to help in determining the correct nutrient rates for target yields. Pulse and legume crops in rotation provide some nitrogen credit that is incorporated in the nutrient recommendations from the labs. In the spring, after the frost is out of the ground, subsoil moisture measurements can be updated before seeding to fine-tune adjustments to nutrient requirements for target yields.

Working with your crop advisor and soil test lab will provide you with the best information to assess your soil nutrient management requirements. Soil sampling is also an important step in the industry led 4R nutrient stewardship program: the Right source, applied at the Right rate, at the Right time and in the Right placement. ■

FOR
MORE
INFO

Contact your nearest Regional Crops Specialist, or Call the Agriculture Knowledge Centre at 1-877-457-2377.

Soil testing laboratories use sophisticated equipment to conduct soil analysis.

Maximizing yields and net returns through nitrogen fertilization on canola



Joanne Kowalski, M.Sc., P.Ag.
Regional Crops Specialist, Prince Albert
Regional Services Branch

New high-yielding canola varieties have the genetic potential to dramatically increase—perhaps even double—yields if supplied with enough nitrogen fertilizer. Over the 2013 growing season, a trial was held at the Conservation Learning Centre (CLC) near Prince Albert to determine the nitrogen fertilization rate that allows the plants to achieve their maximum potential.

A rule of thumb for fertilizing canola is that 100 pounds of nitrogen fertilizer per acre (lb. N/ac.) should produce a maximum yield of 33.33 bushels of canola per acre (on the basis that it takes three pounds of nitrogen to produce a bushel of canola). New high yielding canola varieties have the genetic potential to generate higher yields when more N is available, but, depending on the price for canola, there will be a point where adding more N will not be economically feasible.

The demonstration was set up with four fertilizer rate treatments of 100, 150, 200 and 225 lb. N/ac. applied to three canola varieties. Unfortunately, a spraying error meant one variety had to be dropped. A cost/benefit

analysis was done on the two remaining varieties at three canola prices: \$10.00/bu, \$12.50/bu and \$15.00/bu.

In this one-year trial, yield decreased when the N rate was increased from 100 to 150 lb./ac, but was highest at 200 lb./ac for Variety 1 and at 225 lb./ac for Variety 2. Some extreme variations in yield occurred between replicates of the same treatment. Dry conditions early in the season, low crop emergence and heavy weed pressure may have affected yield differences.

Although there was yield variability within the trial, it did appear that economic returns are feasible with increasing fertilizer N over 100 lb./ac, based on one year of data. The added net return (the average yield increase for the different rates of nitrogen multiplied by the canola price minus the cost of fertilizer over the 100 N rate) for canola Variety 1 ranged from \$29/ac to \$74/ac and from \$75/ac to \$137/ac for Variety 2. The CLC hopes to repeat this trial in 2014.

Funding for this trial was provided through the Ministry of Agriculture's Agricultural Demonstration of Practices and Technologies (ADOPT) Program. ■



Contact Joanne Kowalski, Regional Crops Specialist, at 306-965-2862 or joanne.kowalski@gov.sk.ca; or Call the Conservation Learning Centre at 306-960-1841.

Take control of your canola establishment

Sherrilyn Phelps, M.Sc., P.Ag., CCA
Regional Crops Specialist, North Battleford
Regional Services Branch

Canola establishment can be affected by many factors, some of which are under our control. Decisions at seeding time can influence canola establishment and care should be taken to ensure risks are minimized. Seeding date, rate, depth, speed and air flow can all negatively influence emergence.

Seeding too early when the soil is too cold can delay the time of emergence and stress the small seedlings. Soil should have a three-day average temperature in the seed zone of 4 C to 5 C when seeding is started.

Seeding rate determines the number of seeds put into the ground and hence determines the maximum number of plants that can emerge. It is important to know the seed size when calculating the seeding rate to ensure enough seeds are in the ground.

Seeding depth is critical for small seeded crops like canola. Seeding at one half to one inch in depth is optimum. Deep seeding stresses small seedlings and often results in lower emergence and weak plants.

Increased seeding speed can also have a negative impact on emergence as a result of uneven seeding depth and the breakdown of seed and fertilizer separation. Too much seed-placed fertilizer can also reduce emergence of canola, so care should be taken to ensure the operation does not go over the maximum recommended levels based on soil type, seedbed utilization and soil moisture.

Another factor that is under our control is the fan speed. Too great a wind speed can damage canola seed and affect its ability to germinate and produce a healthy, vigorous seedling.



When checking seeding depth, also check your fertilizer depth to make sure there is good separation from the seed when banding.

In summary, there are many factors under producers' control that can affect canola establishment. Minimize the risks by making the best choices for your operation and taking the time to check and recheck. Once the seed is in the ground, emergence is out of your control. ■



Contact Sherrilyn Phelps, Regional Crops Specialist, at 306-446-7475 or sherrilyn.phelps@gov.sk.ca.

ADOPT Project: Triticale a viable option for greenfeed and swath-grazing



Al Foster, RAG
Forage Specialist
Regional Services Branch

One of the goals of the province's Agri-ARM sites is to provide a place to demonstrate new and existing agricultural technologies and practices to Saskatchewan producers.

In 2013, four Agri-ARM sites including Indian Head, Melfort, Swift Current and Outlook examined annual crops for swath grazing and green feed. This annual forage crop demonstration compared forage yields of oats, barley and golden German millet to two newer varieties of spring triticale, Tyndal and Bunker.

Triticale is a later maturing crop than either oats or barley. A recent, multi year research project at the Agriculture and Agri Food Canada Research Station at Lacombe found that triticale, when harvested at the soft dough stage, yielded more forage than either oats or barley. Generally, the results from the Saskatchewan sites in 2013 indicate that Bunker and Tyndal triticale, when cut at the soft dough stage, yielded similarly to oats cut at the late milk and slightly better than barley cut at the early dough



Lorne Klein, RAG
Forage Specialist
Regional Services Branch

stage. Golden German millet did not yield as well as triticale, oats or barley at three of the four sites.

Forage yields of cool and warm season annuals are highly dependent upon spring and summer precipitation and temperatures and, as a result, can vary considerably between years. A similar project in 2012 at Indian Head, Melfort and Prince Albert demonstrated triticale greenfeed yield was either equal to or less than that of oats, barley and golden German millet.

Both projects were funded by the Agriculture Demonstration of Practices and Technologies (ADOPT) fund. The ADOPT program provides funding to help Saskatchewan producer groups demonstrate and evaluate new agricultural practices and technologies at the local level. ■



Contact a Regional Forage Specialist; or
Call the Agriculture Knowledge Centre at 1-866-457-2377.



Bunker triticale on left, CDC Baler oats on right.



Tyndal triticale (left), Bunker triticale (middle) and Cowboy barley (right).

Should I give my forage stand a fertility boost?



Terry Kowalchuk, M.Sc.
Provincial Forage Specialist
Crops and Irrigation Branch

Forages are often grown on soils that are inherently low in fertility. Newly established stands often produce well, despite this deficit, but eventually the continued export of nutrients from these fields in the form of hay will result in low productivity. In many areas, this is when the land is switched from hay to pasture. Using the land for grazing slows the nutrient removal somewhat, but now nutrients are being exported in the form of beef—eventually the pasture loses productivity.

Do you accept the low productivity and reduce your stocking rates? Failure to reduce grazing intensity will result in overgrazing and stand degradation. Do you break the stand up and reseed it? Or, do you put some of the exported nutrients back into the system by fertilizing? Which option to choose depends on the field and your own individual circumstances. Accepting lower productivity and adjusting stocking rates means less beef. Breaking and reseeding is costly and time consuming, and will take the stand out of production for at least a year. So maybe it is worth taking a second look at fertilizing the stand.

If you are considering fertilization, be prepared to sharpen your pencil and do the math. The economic benefits will depend on the cost of fertilizer, the potential yield increase and the price of hay and cattle. Even if the calculations indicate that it does not pay, there may be other considerations. For example, the extra yield resulting from fertilizer may make your operation more robust by boosting your supplemental feed supply; this could save you the cost of buying and shipping feed in a drought. Feed quality can be improved by improving the soil nutrient status. A vigorous stand will also have fewer issues with invasive weeds, disease and other pest problems.

If you decide to go ahead, remember, the industry's four Rs of fertilizing still apply to forage crops: the Right source, applied at the Right rate, at the Right time and in the Right placement. Spring soil testing and plant tissue testing can help determine soil nutrient deficiencies. ■



Refer to the Fertilizing Forages factsheet on the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca; or
Call the Agriculture Knowledge Centre at 1-866-457-2377.

Perennial forage termination



Brent Flaten, PAg, CCA
Integrated Pest Management Specialist
Regional Services Branch

Perennial forage stands can be terminated by herbicide application, tillage or a combination of both. If the land is to be converted to annual crop production, the timing of this termination is critical to creating a good seed bed for the new crop. It is very rare to be able to terminate hay land or pasture in the spring and then seed a crop that same spring. Using straight tillage in the spring will dry out the soil, making it difficult for the soil lumps to break down in time to create a good seed bed. Also, herbicides applied at this time of year have a tough time moving down into the perennials' roots since food reserves are moving up from the root to support leaf growth.

Perennial forage termination is best done in summer or fall. If terminating with tillage alone, it is best to start tilling when the food reserves in the root are at their lowest point. This occurs when the forages are just starting to flower.

If terminating with herbicides such as glyphosate there are a couple of choices. Forage stands can be sprayed pre-harvest with straight glyphosate. After a wait of three to seven days to allow the herbicide to translocate to the roots, the stand can be cut. With sufficient soil moisture, glyphosate controls alfalfa better towards the end of August when the days begin to shorten, signalling to the plants to start moving food reserves into the roots for winter. During dry years, however, waiting this late to spray out alfalfa and grass can result in poor termination. Terminating mixed stands with alfalfa will often require a pre-harvest application, a post-harvest application to control fall regrowth, and possibly spring burnoff and in-crop suppression. ■

FOR
MORE
INFO

Contact the Agriculture Knowledge Centre at 1-866-457-2377, or Contact a Regional Crop Specialist or Regional Forage Specialist in your area.

Performance of annual crops following termination of perennial forages



Patrick Moolekil, PAg
Soil/Nutrient Management Specialist
Agriculture Knowledge Centre

Producers avoid including perennial forages in their annual crop rotations for fear of reduced grain yields following perennial forages. The extent of yield reduction depends on the type and the duration of the perennial forage.

In the drier parts of the province, forage stands are usually maintained for 10 to 15 years, as the cost and risks associated with stand establishment are high. The adoption of reduced tillage and introduction of inexpensive herbicides have allowed producers to establish forages and terminate them at lower costs and with less risk.

Results of a recently completed study at Swift Current showed no difference in spring or fall soil moisture in the top 30 cm of the soil between the two forage systems (Grass only and Grass/Alfalfa), although soil moisture in the alfalfa/grass mixture tended to be lower (Fig. 1). Differences were observed in the lower soil profile where soil moisture in the alfalfa/grass mixture was lower both in the spring and in the fall. However, the differences were less than 10 mm, indicating that a short-term alfalfa/grass mixture forage crop may not dry the soil significantly enough to affect yields of subsequent crops.

Barley yield in the first year after termination of a three-year-old forage was higher in the alfalfa/grass mixture (Fig. 2). The N benefits of including alfalfa were more pronounced since no additional N fertilizer was applied to the first year barley crop. No differences in barley yields were observed in 2003 due to severe drought. Averaged more than the three rotations, barley yields were higher on alfalfa/grass mixture than on grass alone. No differences in barley yield were observed in the second year when both crops receive 55 lb N/ac.

This study suggests that there is potential for short-term perennial forages in rotation with annual grain crops, and including alfalfa in the forage mixture could enhance yield of subsequent grain crops. ■

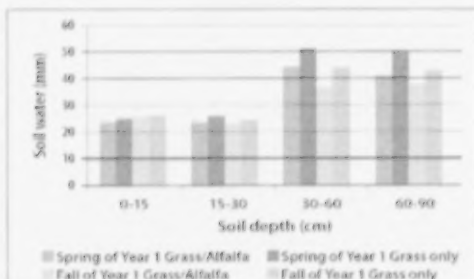


Fig. 1. Spring and fall soil moisture in the first year barley crop averaged over three rotations.

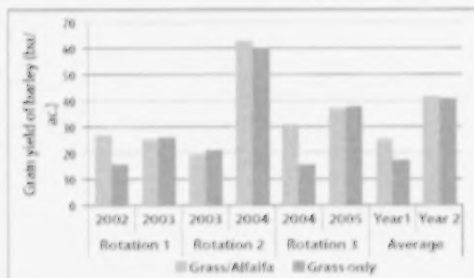


Fig. 2. Yields of first and second barley crops following forage termination. Adopted from Jefferson et al 2013, Can. J. Pl. Sci. 93: 809-816.

FOR
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INFO

Contact the Agriculture Knowledge Centre at 1-866-457-2377, or Visit the Saskatchewan Agriculture website at www.agriculture.gov.ca.

Sainfoin, cicer milkvetch studied at Fairlight grazing demonstration



Lorne Klein, PAg
Regional Forage Specialist
Regional Services Branch

The Southeast Research Farm (SERF) at Redvers conducted a grazing demonstration and root volume project on a quarter section of land it manages near Fairlight. The quarter was seeded to perennial forage and fenced to demonstrate the use of non-bloating legumes (sainfoin, cicer milkvetch) in a pasture mix, and compare the long-term effects of moderate and heavy grazing.

Two forage combinations were seeded on separate parcels: 1) sainfoin, alfalfa, meadow bromegrass, and 2) cicer milkvetch, alfalfa, meadow bromegrass. Each parcel was divided in half to compare moderate and heavy grazing treatments that were applied in 2010-2012 through an Agricultural Demonstration of Practices and Technology (ADOPT) project.

On the sainfoin paddocks, the initial species composition was visually estimated at 25 per cent sainfoin, 50 per cent alfalfa and 25 per cent meadow bromegrass. In 2013, after three years of moderate grazing, the species composition appeared about the same. In the heavily grazed paddock, there was a noticeable shift with legumes being replaced by weedy species including dandelions and thistles. Weedy species were estimated to comprise 15 to 20 per cent of biomass production. In 2013, total seasonal forage production was 38 per cent less on the heavily grazed paddock.

On the cicer milkvetch paddocks, the initial species composition was visually estimated at 20 per cent cicer, 50 per cent alfalfa and 30 per cent meadow bromegrass. After three years of moderate grazing, the cicer milkvetch appeared to have increased to approximately 30 per cent of the stand. In the heavily grazed paddock, there was a noticeable decline in legumes, making up 15 to 20 per cent of biomass production, with weed species replacing the legumes. In 2013, total season forage production was 46 per cent less on the heavily grazed paddock.

There were no cases of bloat during grazing. It is uncertain whether bloating would have occurred without the sainfoin or cicer milkvetch, but grazing these non-bloating legumes with alfalfa further reduces the risk.

The forage yield reductions in this demonstration are consistent with a previous project at SERF that demonstrated significant root volume loss when comparing different clipping frequencies on grass plants.

A detailed report on the Fairlight Grazing Demonstration and Root Volume Project can be obtained from Lorne Klein or the Southeast Research Farm.

FOR MORE INFO

Contact Lorne Klein, Regional Forage Specialist, at 306-848-2582 or lorne.klein@gov.sk.ca or Lana Shaw, Research Manager, with the Southeast Research Farm, at 306-991-5050 or ishaw.serf@gmail.com.



Livestock Services of Saskatchewan now handling brand inspection



Cameron Wilk, PAg
Provincial Manager
Livestock Services of Saskatchewan

Brand inspection, which previously has been provided by the Ministry of Agriculture, is now being handled by Livestock Services of Saskatchewan Corporation (LSS).

LSS is a non-profit entity that will facilitate the delivery of brand inspection services, manage the brand registry and license livestock dealers in Saskatchewan. LSS is owned and operated by the five main livestock sector groups requiring inspection services: the Saskatchewan Cattlemen's Association, Saskatchewan Stock Growers Association, Saskatchewan Cattle Feeders Association, Saskatchewan Horse Federation and Livestock Marketers of Saskatchewan.

The fee structure for inspections, brand registrations and licensing remains the same. The only noticeable change is that GST is now added

to the inspection, brand registration and licensing fees as the new organization is not GST exempt. The horn fee is excluded from the application of GST.

The invoices which previously came from the Ministry of Agriculture now come from and are payable to LSS at:



Livestock Services of Saskatchewan
Rm. 202 3085 Albert Street
Regina, Saskatchewan S4S 0B1

Questions on invoices may be directed to Ms. Kim Pearson, LSS's control officer, at 306-787-5086 or email kim.pearson@lss.ca.

FOR MORE INFO

Contact Cameron Wilk, Provincial Manager, LSS, at 306-787-2195 or cameron.wilk@lss.ca.

Pasture turnout checklist: the pasture, the livestock and the records



Alicia Sopatyk, BSA, AAS
Regional Livestock Specialist, Tisdale
Regional Services Branch

After a winter with extreme temperatures, many producers are simply ready to open the gates and kick the cows out to pasture. However, preparing for pasture turnout is much more than simply opening the gates. Pasture turnout involves assessing the available pastures and livestock, and keeping detailed grazing records.

First assess the pastures. How did they over winter? What was the snow cover? Was there winter kill? Use previous grazing records to help determine this year's grazing plan and contingency plan. Together they



The quadrat method is one of several ways to assess pasture production.

can help ensure pastures that need a rest get a rest. Calculate stocking rates prior to turnout to ensure pasture production is matched with livestock consumption to stop or limit over grazing. Monitor pasture production throughout the season. If over grazing is starting to occur, move the livestock sooner than intended to allow re-growth of that pasture and then re-evaluate the grazing and contingency plans.

Next, assess the livestock. How did they over winter? What are their condition scores? What are their requirements going into the grazing season? Accurately determine livestock weights to calculate stocking rates for all pastures. Review the livestock inventory and determine the breeding program details. Plan to have easy access to livestock for bull turnout, artificial insemination, culling and general treatments that may occur on pasture. Ensure all livestock are properly identified, dehorned and castrated prior to turnout. Consult with your veterinarian on vaccination, deworming and fly control programs and protocols.

Grazing records should be used year to year to help ensure pasture rotation will be best suited for livestock needs throughout the season and that pasture health is maintained. Grazing records should include, but are not limited to, pasture type, production, fertilizer application, precipitation dates and approximate amounts, and livestock turnout and move dates. By developing grazing and contingency plans prior to pasture turnout, producers can be more prepared for the grazing season, which in turn can aid in optimization of summer pastures. ■



Contact a Regional Livestock or Forage Specialist at the nearest Saskatchewan Agriculture Regional Office or
Call the Agriculture Knowledge Centre at 1-866-457-3377.

Incorporating genomic technology into EPDs increases accuracy



Kim McLean, PhD, PhD
Provincial Cattle Specialist, Livestock Branch
Saskatchewan Ministry of Agriculture

When making a bull purchase, there are several tools available to you to help make the final decision. Often, you will find performance data, ultrasound measurements or expected progeny differences (EPDs) within a catalogue or in a bull advertisement. While some may not be fully understood, these tools will help you achieve genetic progress.

Traditionally, EPDs are the product of complicated statistics based on pedigree and performance data for the animal. They have served as the best tool to predict how the offspring of a bull or cow will perform, using the most information available at the time of calculation. For young animals, this is often just their individual performance data and family history. This can result in low accuracy for young sires and most females. However, EPDs can change as more data becomes available, such as their offspring being included in these calculations. By adding more data, the accuracy of EPDs can be enhanced.

Researchers have been working at ways to improve selection of animals, especially for these young unproven sires. Typically, when we hear the letters DNA in the cattle industry, we expect to be talking parentage in

purebred calves. Genetic technology has now progressed far enough that the cattle industry can now test individual animals for 50,000 markers in their DNA.

Breed associations are now able to incorporate this genetic information into EPD calculations, producing genomically enhanced EPDs. In Canada, the Canadian Angus Association has adopted this technology. If the animal has had DNA testing incorporated into their EPD, it will be highlighted as a genomically enhanced EPD. By using this genetic information, there is potential to increase the accuracy of EPDs up to 25 per cent for certain traits in young animals.

There are many factors to consider when selecting a bull. Genetic technologies can simulate a calf crop (for certain traits), helping take some of the guesswork out of selection to maximize genetic progress in your herd. ■



Contact Kim McLean, Provincial Cattle Specialist, at 306-787-4575 or
kim.mclean@gov.sk.ca;
Call the Agriculture Knowledge Centre at 1-866-457-3377; or
Visit the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca.

Learn to take the best possible care of your horses



Carla Nordeen, WCVet
Animal Health Unit
Livestock Branch

Horse owners have several opportunities in April and May to learn how to provide their animals with the best possible care. The Farm Animal Council of Saskatchewan (FACS) and the Western College of Veterinary Medicine will be providing spring seminars for horse owners or dealing with horse needs and the Codes of Practice for the care and handling of equines. Thanks to funding from the Ministry of Agriculture, these seminars are offered free of charge.

The following basic horse needs will be discussed at the seminars:

Feeding: Quality and quantity of feed are important to assess. Owners can learn to body condition score their horses to then make better feeding and care decisions.

Water: A horse requires about 5L/100kg of water per day. This can increase with environmental and metabolic conditions. Snow alone will not meet these requirements and decreased water intake can predispose horses to certain disease processes.

Shelter: Horses need shelter from extreme weather. Trees or stables are sufficient, as are waterproof blankets. Blankets need to be checked at least weekly for rubbing, slipping and leaking.

Exercise: Horses need enough space to walk around. If in stalls, daily exercise should be provided. Tethering is acceptable only for short-term use and requires supervision.

Feet and Teeth: Hooves need to be trimmed regularly. Teeth should be checked once a year and, depending on diet and age of the horse, may need to be checked more frequently.

Worming and Vaccination: Worming and vaccinations are important for the health of your horse. Your veterinarian can advise you on vaccination and deworming schedules.

These seminars will be occurring at the following dates and locations:

April 3	Swift Current – Days Inn
April 10	Estevan – Days Inn
April 17	Lloydminster – Days Inn and Suites
April 24	Regina – Executive Royal Hotel (formerly West Harvest Inn)
May 1	Porcupine Plain – Community Hall
May 8	Saskatoon – Ryan/Dube Equine Performance Centre (WVVM, 11 of 8)

Registration begins at 6:30 p.m. Seminars run from 7 to 9 p.m. @

FOR
MORE
INFO

Contact FACS at facs@sasktel.net or 306-249-3277.

Provincial program helps defer the cost of implementing swine biosecurity initiatives



Julie-Anne Howe, M.Sc.
Animal Health Programs Officer
Livestock Branch

The Ministry of Agriculture is currently working with provincial livestock stakeholders to develop biosecurity programs that meet the needs of the industry and the public. One of the first biosecurity programs to be funded under Growing Forward 2, a federal provincial territorial initiative, is the Saskatchewan Swine Biosecurity Program. This program is designed to help swine producers take biosecurity measures to help prevent the introduction of Porcine Epidemic Diarrhea (PED).

Porcine Epidemic Diarrhea causes acute diarrhea and vomiting in pigs of all ages, with mortality approaching 100 per cent in suckling pigs. The virus is primarily spread by manure, and contaminated transport trailers have been identified as the most likely means of spread. It was first identified in swine in North America in May 2013 in the United States. In January 2014, PED was found in Canada for the first time in Ontario. Since then, PED has also been found in Manitoba and Prince Edward Island, and Quebec as well. The Canadian swine herd is completely naive to this disease, meaning that the spread of the disease could be devastating to the industry.

A solid biosecurity program is vital to minimizing the spread of PED in the Canadian swine herd. There is widespread movement of pigs, feed and trucks throughout North America, which means that heightened biosecurity is necessary for all pork producers in North America. This includes both on-farm biosecurity as well as long transport biosecurity.

This biosecurity program will target all swine producers in Saskatchewan. Producers will be reimbursed up to \$500 for on-farm biosecurity assessments by veterinarians specializing in swine production, and up to \$1000 for the purchase of equipment that will enhance on-farm biosecurity and/or to pay for third-party sanitation audits of transport trucks entering their premises for the purposes of delivering or picking up swine. Owners or operators of transport truck washing facilities can also apply for up to \$500 to assist with third-party biosecurity audits of their facilities to help ensure that trucks leaving their facilities are free from the PED virus.

This program runs until July 31, 2014, and is administered by Sask Pork. Producers can apply for this program by contacting Sask Pork at 306-244-7752, or by visiting www.saskpork.com. @

FOR
MORE
INFO

Contact Julie-Anne Howe, Animal Health Programs Officer, at 306-787-5129 or julie-anne.howe@gov.sk.ca.

Canada Beef – Adding value to the beef supply chain



Bob Weiss
Senior Livestock Policy Analyst
Livestock Branch

On July 1, 2011, Canada Beef became the official marketing agency for Canadian beef. Canada Beef Inc. is an independent national organization representing the research, marketing and promotion of Canadian cattle and beef industry worldwide. In essence, Canada Beef's mission is to enhance and sustain the profitability of Canadian beef producers through excellence in product promotion and positioning and the facilitation of domestic and international marketing initiatives.

Easy to say, but how does Canada Beef do this?

Canada Beef recognizes that, to accomplish its objectives, it must achieve growth in traditional, existing, new and emerging markets for Canadian beef. Also, it must build awareness of the Canadian beef brand and continue to maximize total value realized for Canadian beef through optimization of carcass values.

Historically, marketing programs have created brand awareness, leading to a degree of confidence and trust. However, it is also Canada Beef's goal to create commitment and loyalty to Canada's brand at home and around the world. That, in turn, creates a responsibility for the industry to deliver

a product that is of the quality that Canada's partners are depending on. Everyone in the chain has a role to play, whether it's in food safety, quality or animal health.

Canada Beef is committed to the Canada Beef Advantage. The agency continues to articulate and leverage the Canadian beef story: all the points of distinction and why Canada's product is better. Communicating the benefit of the Canadian Beef Advantage and identifying key markets and priority end use customers are essential to achieve and maintain sustained commitment to Canadian beef in select priority markets and with identified priority end-use customers. Canadian beef is positioned as a premium product, one that delivers what is promised and is worth a premium price. This allows Canada Beef to build the right partnerships instead of trying to compete with all the other suppliers and in turn deliver greater value back to the producers.

Canada Beef continues to work on behalf of Canadian cattlemen to forge partnerships and alliances that provide the most value to the industry. This organization focuses its resources on meeting the goals set out by the Canadian Cattlemen Market Development Council. ■

FOR
MORE
INFO

For more information about Canada Beef, visit their website www.canadabeef.ca or check them out on Twitter at @LoveCANBeef.

U.S. COOL: What you need to know



Rob Swalllow, SA
Senior Trade Policy Analyst
Policy Branch

The United States (U.S.) Country of Origin Labelling (COOL) has been in the news recently with Canada and Mexico challenging COOL at the World Trade Organization (WTO). Given its complexity, there is often confusion on what COOL is and why it is affecting Canadian cattle and hog producers.

The 2008 U.S. Farm Bill established COOL for beef and pork, among other products, sold in U.S. grocery stores. The U.S. government has stated that COOL is not a food safety measure, even though supporters of COOL often make that claim.

The COOL measure requires that cattle and hogs born in Canada and sent to the U.S. for slaughter must be segregated from U.S. born livestock at U.S. feeding operations and processing facilities.

Segregation adds significant costs for American feeding operations, processors and retailers. These costs make Canadian live cattle and hogs less desirable for U.S. buyers, reducing the price they are willing to pay and resulting in a wider basis and a reduction in exports from Canada. Canadian cattle and hog industries estimate damages to be \$1.1 billion per year since COOL was implemented.

Canada and Mexico challenged COOL at the WTO based on the measure discriminating against imported Canadian and Mexican live cattle and hogs. Canada did not challenge COOL as it applies to other commodities or the labelling of meat exported from processors in Canada. Canada's case is not about the right of governments to label products. It is about Canada's right not to have its live cattle and hogs discriminated against in the U.S. market.

The WTO ruled in Canada's favour and gave the U.S. until May 23, 2013, to bring COOL into conformity with its WTO obligations. In response, the U.S. introduced new COOL regulations with two key changes: 1) labels for beef and pork are now required to state the country for each production step and 2) the comingling of muscle cuts from different countries is no longer allowed. This will further increase segregation costs and introduce more inefficiencies into the supply chain.

Canada and Mexico do not believe the new measures bring the U.S. into conformity with their WTO obligations and have initiated WTO compliance panel proceedings. A ruling is expected in the summer of 2014. Assuming Canada and Mexico win, they will then be in a position to ask the WTO for authorization to implement retaliatory tariffs on U.S. exports. ■

FOR
MORE
INFO

Contact Rob Swalllow, Senior Trade Policy Analyst at 306-787-1207 or rob.swalllow@gov.sk.ca.

The following table illustrates how COOL labels are derived

Criteria	Animal born, raised and slaughtered in US	Animal born in foreign country and raised and slaughtered in US	Animal born in US or foreign country, raised in foreign country and slaughtered in US	Animal slaughtered in foreign country	Ground Meat
COOL Labels 2008-2013	Product of US	Product of US & Canada	Product of Canada & US	Product of Canada	Product of US, Canada, Australia
NEW COOL Labels	Born, raised & slaughtered in US	Born in Canada, raised and slaughtered in US	Born & raised in Canada, slaughtered in US – OR – Born in US, raised in Canada, slaughtered in US	Product of Canada	Product of US, Canada, Australia

Brown mustard – a natural biopesticide

Saskatchewan is the largest mustard producing jurisdiction in Canada and one of the largest in the world. Yellow or condiment mustard is used in the food industry as a binder in salad dressings and processed meats. Brown mustard is spicy and hot. The chemical compounds that give brown mustard its distinctive taste are not there to add “zip” to cooking oils; they are there to ward off insects that would feed on the plant.

More and more agricultural pest control products are being made using plants’ natural pest defences, and brown mustard may have an entirely new use as a natural biopesticide.

Brown mustard’s chemical defence, sometimes referred to as “the mustard bomb”, is the interaction of glucosinolates—a class of organic compounds containing sulfur and nitrogen that are present in almost all brassica plants—and the enzyme myrosinase. The result is a variety of organic chemicals of which allyl isothiocyanate (AITC) is the most plentiful. If you have consumed wasabi or horse radish you know what AITC tastes like. The burning sensation is AITC. AITC has potential industrial anti-fungal, antibacterial and bio-fumigant applications. AITC is also known for its anti-cancer properties.

Since AITC is the basis of its flavour, the herb and spice industry already has a method of estimating AITC levels in mustard meal, but the process is too imprecise and time-consuming for industrial purposes. Before mustard can begin its new career, industrial-scale processors need a quick and precise method of identifying AITC in representative samples of mustard seed and meal. Researchers at the University of Saskatchewan, with the financial assistance of the Agriculture Development Fund, set out to find a quick method of measuring AITC and to study the various factors that affect the glucosinolate myrosinase interaction.

They began by looking at the effect of heat on myrosinase activity in *Brassica juncea*. Ground mustard seed was mixed with water and allowed to steep at various temperatures (from seven to 97 C) for various lengths of time (from five to 120 minutes). Myrosinase activity was determined by measuring the amount of AITC. They found that noticeable amounts of AITC could be detected after five minutes of steeping but that enzyme activity was significantly inhibited at temperatures above 57 C, and ceased entirely at 97 C. Then the researchers looked at the effect of pH on myrosinase activity. They found that increasing or decreasing the pH level from neutral significantly reduced enzyme activity and that restoring the mixture to neutral resulted in a further release of AITC.

Brown mustard may have an entirely new use as a natural biopesticide.

Next they looked at the toxicity of brown mustard and AITC. The researchers exposed colonies of nematodes—microscopic worms—to various concentrations of AITC and studied their reactions. The worms were clearly injured by all but the lowest concentrations of AITC and high concentrations were shown to be lethal. The researchers discovered that the nematodes release a specific protein—Heat Shock Protein 70 (HSP70)—when injured by AITC and that the amount released corresponded with the amount of AITC.

Finally, the researchers wanted to determine if there were other compounds beside AITC that contributed to mustard’s toxicity. They exposed nematode colonies to AITC and to AITC plus ground mustard and measured the expression of HSP70. They found that the nematodes exposed to AITC alone expressed more HSP70 than the nematodes exposed to AITC plus ground mustard. From this they concluded that 1) AITC is the primary source of mustard’s toxicity and 2) there are some other components of ground mustard or perhaps the mustard oil that reduce the toxicity of AITC.

With this information they were able to develop a new method using HSP70 to measure AITC in mustard meal or oil that was suitable for industrial uses. The mustard industry now has the ability to easily screen for high and low concentrations of AITC which could help it develop entirely new industrial uses for mustard.

The Agriculture Development Fund provides funding to institutions, companies and industry organizations to help them carry out research, development and value added activities in the agriculture and agri-food sector. The results produce new knowledge, information and choices in technologies, techniques and varieties for farmers, ranchers, processors and input suppliers, to improve the competitiveness of Saskatchewan’s agriculture sector.

In 2014, the Saskatchewan Ministry of Agriculture and Agriculture and Agri-Food Canada committed \$11.2 million in new funding for 73 ADF research projects through Growing Forward 2, a federal-provincial-territorial initiative. ■

FOR MORE INFO

Visit the Saskatchewan Agriculture research reports page at www.agriculture.gov.sk.ca/ADF/Search and enter the report number # 20040548 into the search function.

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AgriStability enrolment fee/notice



Growing Forward 2

A federal-provincial-territorial initiative

AgriStability is one of four business risk management (BRM) programs designed to help farmers manage their risks. AgriStability supports producers who experience a large margin decline in farm income. Payments are based on a 30 per cent or greater margin decline in the farm's current production year compared to a three out of five year historical average.

AgriStability's April 30, 2014, deadline is fast approaching. All participants in the AgriStability Program have until this date to pay their program fee. If a producer misses the deadline, and the program fee is paid after the deadline date, a 20 per cent penalty is applied to the total fee amount.

For those producers in Saskatchewan who are interested in signing up for AgriStability for the first time, or those who want to re-join after being out for one or more years, April 30, 2014 is also the deadline. Anyone interested in re-joining or signing up for AgriStability must request a 'New Participant Package' by April 30 or they will not be eligible for the 2014 program year. Also, if a producer wishes to opt out

of AgriStability, they are required to notify Saskatchewan Crop Insurance Corporation (SCIC) by April 30.

Support is available to help producers meet this important deadline. Local Crop Insurance Program advisors are located throughout the province and can be reached through any of the 21 customer service offices. If a producer needs to access a form or requires a guide for completing the form, they can be found online at www.saskcropinsurance.com.

The Program Advisors are close at hand, providing direct, local expertise. For more information on your area's program advisor contact SCIC. ■

FOR
MORE
INFO

Contact your local Crop Insurance customer service office;
Call the AgriStability call centre at 1-866-270-8450;
Visit www.saskcropinsurance.com; or
Via e-mail agristability@scic.gov.sk.ca.

Wildlife predation compensation and prevention

Saskatchewan is home to a wide variety of predators, including bears, birds, cougars, coyotes, foxes and wolves. These various predators pose a challenge to raising livestock for producers.

Saskatchewan Crop Insurance Corporation (SCIC) provides 100 per cent compensation for the confirmed death of livestock, fowl or specialty animals as a result of predation through the Wildlife Damage Compensation and Livestock Predation Prevention Program.

There are policies that have been put in place by SCIC to ensure the accountability of the program. In order for compensation to be paid to a producer, an inspection must occur. This inspection includes an adjuster visiting your farm and assessing if there is sufficient evidence to prove there was a predator attack. Evidence includes carcass, attack or kill site and the presence of a predator.

Two-thirds of a carcass should be present to evaluate the attack. SCIC will also need to determine if the animal was alive prior to the predator attack. Adjusters are trained in determining whether the death was the result of a predator attack or another cause. If there is no carcass or there is no evidence to prove a predator attack, no payment will be issued. If there was little to no remains left of the animal, adjusters will review the evidence present. If evidence is inconclusive, but the probable cause is a predator, producers will receive 50 per cent compensation.

Please note, SCIC also provides compensation if animals are injured in an attack. In the event that livestock are injured, producers can receive up to 80 per cent of the animal's value to cover veterinary costs.



SCIC can also help producers manage their predator attacks through control measures designed to reduce the problems. There are a number

of recommended predator prevention management strategies that may be made, including, but not limited to: fencing that is effective and specific to livestock/fowl operation, fence patrol, properly trained guardian dogs, use of llamas and donkeys as guardian animals or noise, light and other deterrents.

Predation specialists may be recommended by a SCIC adjuster to assess the situation and take steps to eliminate the predator problem. Predation specialists are experienced and can provide advice and strategies to protect livestock from future attacks.

What is expected from farmers and ranchers?

- Contact a Crop Insurance office as soon as a predator attack is discovered.
- Preserve any evidence of an attack for an adjuster to inspect.
- Take photos to record evidence of an attack.
- Follow recommended preventative measures to reduce problem wildlife. ■

FOR
MORE
INFO

Contact your local Crop Insurance office;
Call 1-888-935-0000; or
Visit www.saskcropinsurance.com/wildlife.

Events calendar

Date	Event	Location	Phone	Internet
April 5, 2014	Ag in the City	Saskatoon, SK		www.celebrateagriculture.ca
April 10-11, 2014	Western Canadian Dairy Expo	Saskatoon, SK	306-931-7149	www.saskatoonex.com
April 10-12, 2014	Discover the Farm: A Farm Facts Experience	Swift Current, SK	306-773-2944	www.swiftcurrentex.com
April 24-26, 2014	4-H Spring Steer and Heifer Show	Yorkton, SK	306-783-4800	www.yorktonexhibition.com
April 30, 2014	Deadline to request an AgriStability New Participant Package and pay fees.	Saskatchewan	1-888-935-0000	www.saskcropinsurance.com

Connecting kids with agriculture



Krystal Aulie
Provincial Business Management Specialist,
HR and Youth Agriculture Awareness Unit
Regional Services Branch

We can all remember the anxiety we felt walking into our first high school science class—biology, physics and chemistry were a complete mystery. This perception of science has led many students to steer away from scientific career paths, including those in agriculture, and miss the reality that careers in science are exciting, dynamic and in high demand.

The Saskatchewan Ministry of Education is currently piloting new high school science curricula, which will be available in the fall of 2014 and required in the fall of 2015. This new approach replaces Grade 11 (20 level) biology, physics and chemistry with health sciences, environmental sciences and physical sciences. These courses are designed to directly relate to various careers available in science and will also include modules on career exploration.

The new curricula present an opportunity to provide high school students with an introduction to the science of agriculture. Through Growing Forward 2, a federal-provincial-territorial initiative, the Ministry of Agriculture is supporting the development of curriculum based agricultural resources that will align with the new courses.

To help empower industry groups to participate in youth agriculture education, the Ministry has hosted several briefings on the new curriculum. Funding is available to support resource development projects through the Agriculture Awareness Initiative Program, as announced last spring, and more than a dozen groups have already received funding to help support their efforts.

Creating resources that align with the curriculum provides a tremendous opportunity to tell the agriculture story, and to ensure teachers and children alike understand the science behind food production.



Clinton Monchuk, Chair of Agriculture in the Classroom, reads to students during Agriculture Literacy Week.

The Ministry has an on going funding agreement with Agriculture in the Classroom which enables them to collaborate with industry to develop additional resources for high school students. ■

FOR
MORE
INFO

Contact Krystal Aulie, Provincial Business Management Specialist,
HR and Youth, at 306-798-0947 or krystal.aulie@gov.sk.ca.